



January 10, 2014

US EPA RECORDS CENTER REGION 5



467810

Mr. Owen Thompson
United States Environmental Protection Agency
Office of Superfund, Region 5
SR-6J
77 West Jackson Blvd.
Chicago, IL 60604-3590

Certified Mail, Return Receipt: 7004 1160 0003 4669 2160

Subject: Monthly Status Report-December 2013
Fields Brook Superfund Site
Detrex Source Area-Ashtabula, Ohio

Dear Mr. Thompson,

Detrex is submitting the enclosed monthly status report for the month of December 2013, for the Detrex Source Area Project.

If you have any questions, please contact me at (440) 997-6131, ext. 201.

Sincerely,

A handwritten signature in cursive script, reading "Thomas W. Steib", is located below the "Sincerely," text.

Thomas W. Steib
Vice President Manufacturing

cc: T. Doll, D. Church, R. Currie, J. Vence, K. Buell, URS, R. Williams

FIELDS BROOK SUPERFUND SITE, OPERABLE UNIT #2
DETREX SOURCE AREA
MONTHLY TECHNICAL STATUS REPORT

Project Phase: Remedial Design and Remedial Action.

Prepared by: Tom Steib of Detrex Corporation.

Period: Month of December 2013.

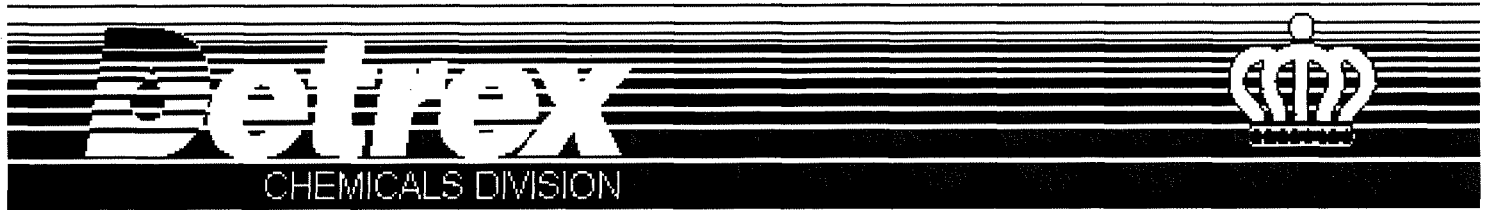
1. Progress Made This Reporting Period:

ACTIVITY	THIS PERIOD GALLONS	YEAR TO DATE GALLONS	TOTAL GALLONS
Estimated DNAPL Recovered	-0- (Does not include volume in inside settling tank)	550	18,030
DNAPL Disposed	-0-	550	18,030

- A. There were -0- gallons of DNAPL pumped into totes and ready for disposal.
- B. Wells 1, 2, 4, 5, 6, 8, 9, 10, and 11 are working.
- C. Wells 12 and 14 were taken out to inspect sand pack, etc during experimental well installation in December 2012.
- D. NPDES Compliance. Detrex is in full compliance of our NPDES permit for the month of December 2013. A copy of the MOR is available upon request.

2. Work Planned During the Next 90 Days.

- A. Winterization for the current and expected future cold weather.



December 17, 2013

Mr. Owen Thompson
United States Environmental Protection Agency
Office of Superfund, Region 5
SR-6J
77 West Jackson Blvd.
Chicago, IL 60604-3590

Certified Mail, Return Receipt: 7004 1160 0003 4669 2139

Subject: Monthly Status Report-November 2013
Fields Brook Superfund Site
Detrex Source Area-Ashtabula, Ohio

Dear Mr. Thompson,

Detrex is submitting the enclosed monthly status report for the month of November 2013, for the Detrex Source Area Project.

If you have any questions, please contact me at (440) 997-6131, ext. 201.

Sincerely,

Thomas W. Steib
Vice President Manufacturing

cc: T. Doll, D. Church, R. Currie, J. Vence, K. Buell, URS, R. Williams

FIELDS BROOK SUPERFUND SITE, OPERABLE UNIT #2
DETREX SOURCE AREA
MONTHLY TECHNICAL STATUS REPORT

Project Phase: Remedial Design and Remedial Action.

Prepared by: Tom Steib of Detrex Corporation.

Period: Month of November 2013.

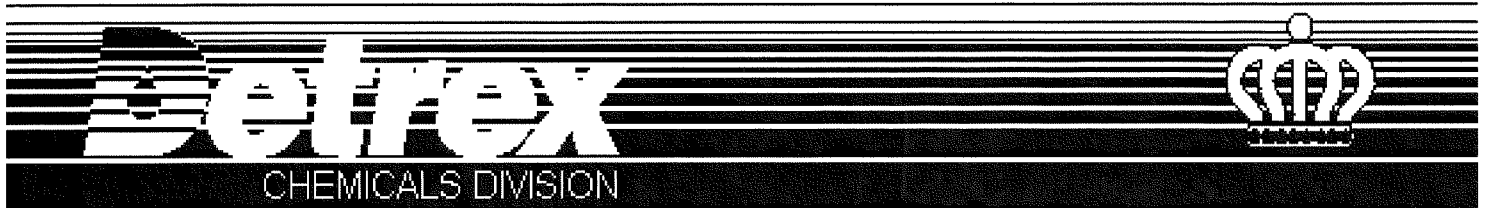
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Estimated DNAPL Recovered	-0- (Does not include volume in inside settling tank)	550	18,030
DNAPL Disposed	550	550	18,030

- A. There were -0- gallons of DNAPL pumped into totes and ready for disposal.
- B. Wells 1, 2, 4, 5, 6, 8, 9, 10, and 11 are working.
- C. Wells 12 and 14 were taken out to inspect sand pack, etc during experimental well installation in November 2012.
- D. NPDES Compliance. Detrex is in full compliance of our NPDES permit for the month of November 2013. A copy of the MOR is available upon request.

2. Work Planned During the Next 90 Days.

- A. Winterization for the current and expected future cold weather.



November 14, 2013

Mr. Owen Thompson
United States Environmental Protection Agency
Office of Superfund, Region 5
SR-6J
77 West Jackson Blvd.
Chicago, IL 60604-3590

Certified Mail, Return Receipt: 7004 1160 0003 4669 2115

Subject: Monthly Status Report-October 2013
Fields Brook Superfund Site
Detrex Source Area-Ashtabula, Ohio

Dear Mr. Thompson,

Detrex is submitting the enclosed monthly status report for the month of October 2013, for the Detrex Source Area Project.

If you have any questions, please contact me at (440) 997-6131, ext. 201.

Sincerely,

Thomas W. Steib
Vice President Manufacturing

cc: T. Doll, D. Church, R. Currie, J. Vence, K. Buell, URS, R. Williams

FIELDS BROOK SUPERFUND SITE, OPERABLE UNIT #2
DETREX SOURCE AREA
MONTHLY TECHNICAL STATUS REPORT

Project Phase: Remedial Design and Remedial Action.

Prepared by: Tom Steib of Detrex Corporation.

Period: Month of October 2013.

1. Progress Made This Reporting Period:

ACTIVITY	THIS PERIOD GALLONS	YEAR TO DATE GALLONS	TOTAL GALLONS
Estimated DNAPL Recovered	-0- (Does not include volume in inside settling tank)	550	18,030
DNAPL Disposed	550	550	18,030

- A. There were -0- gallons of DNAPL pumped into totes and ready for disposal.
- B. Wells 1, 2, 4, 5, 6, 8, 9, 10, and 11 are working.
- C. Wells 12 and 14 were taken out to inspect sand pack, etc during experimental well installation in October 2012.
- D. DNAPL sample wells were sampled and measured for DNAPL level. Results are attached.
- E. NPDES Compliance. Detrex is in full compliance of our NPDES permit for the month of October 2013. A copy of the MOR is available upon request.

2. Work Planned During the Next 90 Days.

- A. Winterization for the upcoming cold weather.

Detrex Ashtabula, OH DNAPL Well VOC Analyses

November 14, 2013

Date Sampled	10/16/13	10/16/13	10/16/13	10/16/13	10/16/13	10/16/13	10/16/13	10/16/13	10/16/13
Well Number	MW-21	MW-02S	MW-04S	MW-10	MW-17S	MW-18S	RMI-N	RMI-S	Trip Blank
VOC									
1,1,1-Trichloroethane, ug/l	<5.00	<5.00	<500	<500	<5.00	<5.00	<5.00	<5.00	<5.00
1,1,2,2-Tetrachloroethane, ug/l	<5.00	<5.00	<500	1,700	<5.00	<5.00	<5.00	<5.00	<5.00
1,1,2-Trichloroethane, ug/l	<5.00	<5.00	<500	<500	<5.00	<5.00	<5.00	<5.00	<5.00
1,1-Dichloroethene, ug/l	<5.00	<5.00	1,200	<500	<5.00	<5.00	<5.00	<5.00	<5.00
Choroform, ug/l	<5.00	<5.00	<500	<500	<5.00	<5.00	<5.00	<5.00	<5.00
Methylene Chloride, ug/l	<10.0	<10.0	<500	<500	<10.0	<10.0	<10.0	<10.0	<10.0
Trichloroethene, ug/l	<5.00	<5.00	40,700	40,000	<5.00	<5.00	<5.00	1,570	<5.00

Date Sampled	01/17/13	01/17/13	01/17/13	01/17/13	01/17/13	01/17/13	01/17/13	01/17/13	01/17/13
Well Number	MW-21	MW-02S	MW-04S	MW-10	MW-17S	MW-18S	RMI-N	RMI-S	Trip Blank
VOC									
1,1,1-Trichloroethane, ug/l	<5.00	<5.00	<250	<250	<5.00	<5.00	<5.00	<5.00	<5.00
1,1,2,2-Tetrachloroethane, ug/l	<5.00	<5.00	<250	1,340	<5.00	<5.00	<5.00	<5.00	<5.00
1,1,2-Trichloroethane, ug/l	<5.00	<5.00	<250	<250	<5.00	<5.00	<5.00	8.33	<5.00
1,1-Dichloroethene, ug/l	<5.00	<5.00	1,020	<250	<5.00	<5.00	<5.00	6.09	<5.00
Choroform, ug/l	<5.00	<5.00	<250	<250	<5.00	<5.00	<5.00	<5.00	<5.00
Methylene Chloride, ug/l	<10.0	<10.0	<500	<500	<10.0	<10.0	<10.0	<10.0	<10.0
Trichloroethene, ug/l	<5.00	<5.00	45,100	56,900	<5.00	<5.00	<5.00	2,530	<5.00

Date Sampled	11/07/12	11/07/12	11/07/12	11/07/12	11/07/12	11/07/12	11/07/12	11/07/12	11/07/12
Well Number	MW-21	MW-02S	MW-04S	MW-10	MW-17S	MW-18S	RMI-N	RMI-S	Trip Blank
VOC									
1,1,1-Trichloroethane, ug/l	<5.0	<5.0	<250	<250	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<5.0	<250	2,620	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane, ug/l	<5.0	<5.0	<250	<250	<5.0	<5.0	<5.0	6.22	<5.0
1,1-Dichloroethene, ug/l	<5.0	<5.0	1,180	<250	<5.0	<5.0	<5.0	<5.0	<5.0
Choroform, ug/l	<5.0	<5.0	268	375	<5.0	<5.0	<5.0	5.1	<5.0

Detrex Ashtabula, OH Well Water and DNAPL Levels

November 14, 2013

October 16, 2013				
Well	Depth	Depth	Depth to	Depth of
Number	To Water	to DNAPL	Bottom	DNAPL
RMW-1	4.10	21.00	26.60	5.60
RMW-2	5.00	19.80	23.70	3.90
RMW-3	7.20	16.80	24.70	7.90
MW-7	4.10	9.20	15.70	6.50
MW-10	7.10	None	19.90	None
MW-02S	6.00	None	15.00	None
MW-02D	5.70	None	52.30	None
MW-04S	6.80	None	16.50	None
MW-17D	4.80	None	50.30	None
MW-17S	12.20	None	17.20	None
MW-18D	5.90	None	52.60	None
MW-18S	6.90	None	17.20	None
MW-21	4.30	None	28.20	None
SLURRY NORTH	8.70	None	17.40	None
SLURRY SOUTH	10.60	None	21.30	None

Note: Depths measured in feet from top of outer protective casing.

July 9, 2013				
Well	Depth	Depth	Depth to	Depth of
Number	To Water	to DNAPL	Bottom	DNAPL
RMW-1	3.20	20.80	21.90	1.10
RMW-2	4.30	20.80	23.70	2.90
RMW-3	6.30	18.40	24.50	6.10
MW-7	4.90	10.00	12.70	2.70
MW-10	6.00	None	19.70	None
MW-02S	3.00	None	14.90	None
MW-02D	5.60	None	52.80	None
MW-04S	6.50	None	16.50	None
MW-17D	4.40	None	50.40	None
MW-17S	3.90	None	17.20	None
MW-18D	6.00	None	52.70	None
MW-18S	2.70	None	17.20	None
MW-21	3.20	None	28.30	None
SLURRY NORTH	7.40	None	17.30	None
SLURRY SOUTH	8.40	None	21.40	None

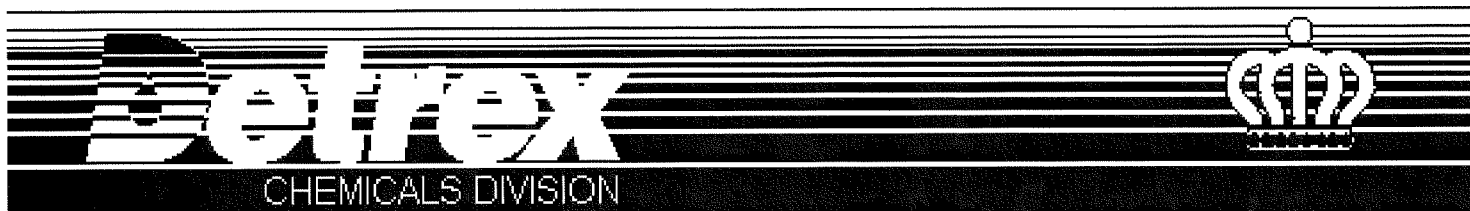
Note: Depths measured in feet from top of outer protective casing.

TestAmerica

Cobalt, ICPMS	mg/L	0.00793	0.00864	0.00817	0.00752
Copper, ICP	mg/L	<0.200	<0.200	<0.200	<0.200
Iron, ICP	mg/L	<1.00	<1.00	<1.00	<1.00
Lead, ICPMS	mg/L	<0.00400	<0.00400	<0.00800	<0.00400
Magnesium, ICP	mg/L	1,330	1,260	1,090	1,060
Manganese, ICP	mg/L	34.3	38.8	39.9	40.5
Nickel, ICP	mg/L	<0.100	<0.100	<0.100	<0.100
Potassium, ICP	mg/L	34.8	38.4	31.4	33
Selenium, ICPMS	mg/L	<0.0440	<0.0400	<0.0800	<0.100
Silver, ICP	mg/L	<0.400	<0.400	<0.400	<0.400
Sodium, ICP	mg/L	853	974	892	912
Thallium, ICPMS	mg/L	<0.00400	<0.00400	<0.00800	<0.00400
Vanadium, ICP	mg/L	<0.100	<0.500	<0.100	<0.100
Zinc, ICP	mg/L	<0.500	<0.500	<0.500	<0.500

MAL 2011'E5

Notes:



October 17, 2013

Mr. Owen Thompson
United States Environmental Protection Agency
Office of Superfund, Region 5
SR-6J
77 West Jackson Blvd.
Chicago, IL 60604-3590

Certified Mail, Return Receipt: 7011 0470 0000 4669 2085

Subject: Monthly Status Report-September 2013
Fields Brook Superfund Site
Detrex Source Area-Ashtabula, Ohio

Dear Mr. Thompson,

Detrex is submitting the enclosed monthly status report for the month of September 2013, for the Detrex Source Area Project.

If you have any questions, please contact me at (440) 997-6131, ext. 201.

Sincerely,

Thomas W. Steib
Vice President Manufacturing

cc: T. Doll, D. Church, R. Currie, J. Vence, K. Buell, URS, R. Williams

FIELDS BROOK SUPERFUND SITE, OPERABLE UNIT #2
DETREX SOURCE AREA
MONTHLY TECHNICAL STATUS REPORT

Project Phase: Remedial Design and Remedial Action.

Prepared by: Tom Steib of Detrex Corporation.

Period: Month of September 2013.

1. Progress Made This Reporting Period:

ACTIVITY	THIS PERIOD GALLONS	YEAR TO DATE GALLONS	TOTAL GALLONS
Estimated DNAPL Recovered	-0- (Does not include volume in inside settling tank)	550	18,030
DNAPL Disposed	550	550	18,030

- A. There were -0- gallons of DNAPL pumped into totes and ready for disposal.
- B. Wells 1, 2, 4, 5, 6, 8, 9, 10, and 11 are working.
- C. Wells 12 and 14 were taken out to inspect sand pack, etc during experimental well installation in October 2012.
- D. NPDES Compliance. Detrex is in full compliance of our NPDES permit for the month of September 2013. A copy of the MOR is available upon request.

2. Work Planned During the Next 90 Days.

- A. Winterization for the upcoming cold weather.



September 19, 2013

Mr. Owen Thompson
United States Environmental Protection Agency
Office of Superfund, Region 5
SR-6J
77 West Jackson Blvd.
Chicago, IL 60604-3590

Certified Mail, Return Receipt: 7011 0470 0000 3159 2147

Subject: Monthly Status Report-August 2013
Fields Brook Superfund Site
Detrex Source Area-Ashtabula, Ohio

Dear Mr. Thompson,

Detrex is submitting the enclosed monthly status report for the month of August 2013, for the Detrex Source Area Project.

If you have any questions, please contact me at (440) 997-6131, ext. 201.

Sincerely,

Thomas W. Steib
Vice President Manufacturing

cc: T. Doll, D. Church, R. Currie, J. Vence, K. Buell, URS, R. Williams

FIELDS BROOK SUPERFUND SITE, OPERABLE UNIT #2
DETREX SOURCE AREA
MONTHLY TECHNICAL STATUS REPORT

Project Phase: Remedial Design and Remedial Action.

Prepared by: Tom Steib of Detrex Corporation.

Period: Month of August 2013.

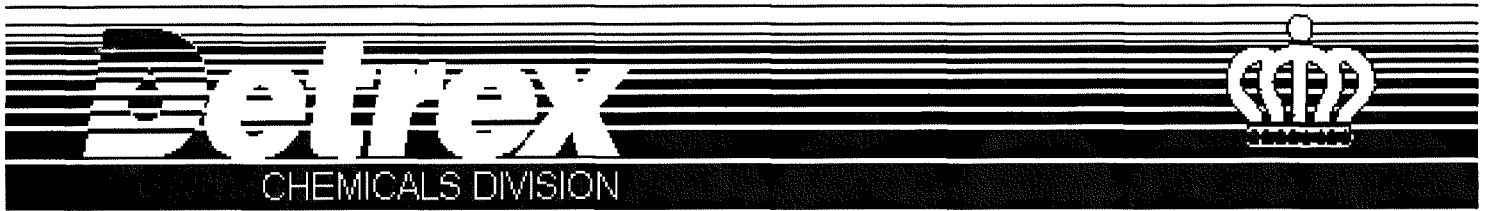
1. Progress Made This Reporting Period:

ACTIVITY	THIS PERIOD GALLONS	YEAR TO DATE GALLONS	TOTAL GALLONS
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- A. There were -0- gallons of DNAPL pumped into totes and ready for disposal.
- B. Wells 1, 2, 4, 5, 6, 8, 9, 10, and 11 are working.
- C. Wells 12 and 14 were taken out to inspect sand pack, etc during experimental well installation in October 2012.
- D. NPDES Compliance. Detrex is in full compliance of our NPDES permit for the month of August 2013. A copy of the MOR is available upon request.

2. Work Planned During the Next 90 Days.

- A. Winterization for the upcoming cold weather.



August 13, 2013

Mr. Owen Thompson
United States Environmental Protection Agency
Office of Superfund, Region 5
SR-6J
77 West Jackson Blvd.
Chicago, IL 60604-3590

Certified Mail, Return Receipt: 7004 1160 0003 4669 1880

Subject: Monthly Status Report-July 2013
Fields Brook Superfund Site
Detrex Source Area-Ashtabula, Ohio

Dear Mr. Thompson,

Detrex is submitting the enclosed monthly status report for the month of July 2013, for the Detrex Source Area Project.

If you have any questions, please contact me at (440) 997-6131, ext. 201.

Sincerely,

Thomas W. Steib
Vice President Manufacturing

cc: T. Doll, D. Church, R. Currie, J. Vence, K. Buell, URS, R. Williams

FIELDS BROOK SUPERFUND SITE, OPERABLE UNIT #2
DETREX SOURCE AREA
MONTHLY TECHNICAL STATUS REPORT

Project Phase: Remedial Design and Remedial Action.

Prepared by: Tom Steib of Detrex Corporation.

Period: Month of July 2013.

1. Progress Made This Reporting Period:

ACTIVITY	THIS PERIOD GALLONS	YEAR TO DATE GALLONS	TOTAL GALLONS
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DNAPL Disposed	550	550	18,030

- A. There were -0- gallons of DNAPL pumped into totes and ready for disposal.
- B. Wells 1, 2, 4, 5, 6, 8, 9, 10, and 11 are working.
- C. Wells 12 and 14 were taken out to inspect sand pack, etc during experimental well installation in October 2012.
- D. During August 7, 8, and 9, approximately 50,000 gallons of water was pumped from Fields Brook collection sump and treated through Detrex's storm water treatment system. The analyses of the collection sump water prior to treatment are attached.
- E. NPDES Compliance. Detrex is in full compliance of our NPDES permit for the month of July 2013. A copy of the MOR is available upon request.

2. Work Planned During the Next 90 Days.

- A. Due to the inactivity of the wells during the pump down of the six experimental wells, many of the current wells are inoperable. Effort will be made to bring as many wells into operation as possible pending final decision from US EPA as to the direction forward.



Precision Analytical, Inc.
4450 Johnston Parkway Unit B
Cleveland, OH 44128
TEL: 216 663 0808 FAX: 216 663 0656
Website: www.precisionanalytical.com

August 02, 2013

Sam Spain
Detrex Corporation
1100 N. State Road
Ashtabula, OH 44004
TEL: (440) 997-6131
FAX: (440) 992-2904

RE: Flood Plain East, Flood Plain West & State

Order No.: 1307645

Dear Sam Spain:

Precision Analytical, Inc. received 3 sample(s) on 7/26/2013 for the analyses presented in the following report.

There were no problems with the analytical events associated with this report unless noted in an attached Case Narrative. Quality control data is within laboratory defined or method specified acceptance limits except if noted. Note that sample results reported relate only the samples as received at the laboratory.

Solid samples are reported in ug/Kg or mg/Kg as received, unless specified in the units as dry weight. Unless otherwise noted, results have not been background or blank corrected.

If you have any questions regarding these tests results, please feel free to call.

Certifications: Ohio EPA - 4041; NELAC PA - 68-00434; W.Va DEP - 245

Sincerely,

A handwritten signature in black ink, appearing to be 'Cary Mathias', written over a horizontal line.

Cary Mathias
President



PRECISION
ANALYTICAL, INC.

Precision Analytical, Inc.
4450 Johnston Parkway Unit B
Cleveland, OH 44128
TEL: 216 663 0808 FAX: 216 663 0656
Website: www.precisionanalytical.com

Analytical Report

(consolidated)

WO#: 1307645

Date Reported: 8/2/2013

CLIENT: Detrex Corporation **Collection Date:** 7/25/2013 10:00:00 AM
Project: Flood Plain East, Flood Plain West & State Rd West
Lab ID: 1307645-001 **Matrix:** AQUEOUS
Client Sample ID: Flood Plain-East

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS, LIQUID						
					SW8082	Analyst: MIM
POLYCHLORINATED BIPHENYLS (PCBS), LIQUID						
Aroclor 1016	ND	0.0000250		mg/L	1	7/31/2013 2:14:00 AM
Aroclor 1221	ND	0.0000250		mg/L	1	7/31/2013 2:14:00 AM
Aroclor 1232	ND	0.0000250		mg/L	1	7/31/2013 2:14:00 AM
Aroclor 1242	ND	0.0000250		mg/L	1	7/31/2013 2:14:00 AM
Aroclor 1248	ND	0.0000250		mg/L	1	7/31/2013 2:14:00 AM
Aroclor 1254	ND	0.0000250		mg/L	1	7/31/2013 2:14:00 AM
Aroclor 1260	ND	0.0000250		mg/L	1	7/31/2013 2:14:00 AM
Surr: Decachlorobiphenyl	84.0	30-150		%REC	1	7/31/2013 2:14:00 AM
Surr: Tetrachloro-m-xylene	38.0	30-150		%REC	1	7/31/2013 2:14:00 AM
TCL VOC						
					SW8260B	Analyst: AC
VOLATILE ORGANIC COMPOUNDS						
1,1,1-Trichloroethane	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
1,1,2,2-Tetrachloroethane	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
1,1,2-Trichloroethane	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
1,1-Dichloroethane	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
1,1-Dichloroethene	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
1,2-Dichloroethane	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
1,2-Dichloropropane	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
2-Hexanone	ND	0.0100		mg/L	1	7/30/2013 10:34:00 AM
4-Methyl-2-pentanone	ND	0.0200		mg/L	1	7/30/2013 10:34:00 AM
Acetone	ND	0.0500		mg/L	1	7/30/2013 10:34:00 AM
Benzene	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
Bromodichloromethane	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
Bromoform	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
Bromomethane	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
Carbon disulfide	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
Carbon tetrachloride	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
Chlorobenzene	0.00353	0.00500	J	mg/L	1	7/30/2013 10:34:00 AM
Chloroethane	ND	0.0100		mg/L	1	7/30/2013 10:34:00 AM
Chloroform	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
Chloromethane	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
cis-1,2-Dichloroethene	0.0166	0.00500		mg/L	1	7/30/2013 10:34:00 AM
cis-1,3-Dichloropropene	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- DF Dilution Factor
- J Analyte detected below quantitation limits
- MDL Method Detection Limit
- ND Not Detected at the Reporting Limit
- PL Permit Limit
- S Spike outside acceptance limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- N Tentatively identified compounds
- O RSD is greater than RSDlimit
- RL Reporting Detection Limit (PQL)



Precision Analytical, Inc.
4450 Johnston Parkway Unit B
Cleveland, OH 44128

TEL: 216 663 0808 FAX: 216 663 0656
Website: www.precisionanalytical.com

Analytical Report

(consolidated)

WO#: 1307645

Date Reported: 8/2/2013

CLIENT: Detrex Corporation **Collection Date:** 7/25/2013 10:00:00 AM
Project: Flood Plain East, Flood Plain West & State Rd West
Lab ID: 1307645-001 **Matrix:** AQUEOUS
Client Sample ID: Flood Plain-East

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TCL VOC				SW8260B	Analyst: AC	
VOLATILE ORGANIC COMPOUNDS						
Dibromochloromethane	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
Ethylbenzene	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
m,p-Xylene	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
Methyl ethyl ketone	ND	0.0500		mg/L	1	7/30/2013 10:34:00 AM
Methylene chloride	ND	0.0100		mg/L	1	7/30/2013 10:34:00 AM
o-Xylene	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
Styrene	ND	0.0200		mg/L	1	7/30/2013 10:34:00 AM
Tetrachloroethene	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
Toluene	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
trans-1,2-Dichloroethene	ND	0.0100		mg/L	1	7/30/2013 10:34:00 AM
trans-1,3-Dichloropropene	ND	0.00500		mg/L	1	7/30/2013 10:34:00 AM
Trichloroethene	0.00364	0.00500	J	mg/L	1	7/30/2013 10:34:00 AM
Vinyl acetate	ND	0.0100		mg/L	1	7/30/2013 10:34:00 AM
Vinyl chloride	0.00458	0.00500	J	mg/L	1	7/30/2013 10:34:00 AM
Surr: 4-Bromofluorobenzene	98.4	80-120		%REC	1	7/30/2013 10:34:00 AM
Surr: Dibromofluoromethane	102	80-120		%REC	1	7/30/2013 10:34:00 AM
Surr: Toluene-d8	87.5	80-120		%REC	1	7/30/2013 10:34:00 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- DF Dilution Factor
- J Analyte detected below quantitation limits
- MDL Method Detection Limit
- ND Not Detected at the Reporting Limit
- PL Permit Limit
- S Spike outside acceptance limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- N Tentatively identified compounds
- O RSD is greater than RSDlimit
- RL Reporting Detection Limit (PQL)



Precision Analytical, Inc.
4450 Johnston Parkway Unit B
Cleveland, OH 44128
TEL: 216 663 0808 FAX: 216 663 0656
Website: www.precisionanalytical.com

Analytical Report

(consolidated)

WO#: 1307645

Date Reported: 8/2/2013

CLIENT: Detrex Corporation

Collection Date: 7/25/2013 10:30:00 AM

Project: Flood Plain East, Flood Plain West & State Rd West

Lab ID: 1307645-002

Matrix: AQUEOUS

Client Sample ID: Flood Plain-West

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS, LIQUID				SW8082		Analyst: MIM
POLYCHLORINATED BIPHENYLS (PCBS), LIQUID						
Aroclor 1016	ND	0.0000250		mg/L	1	7/31/2013 2:49:00 AM
Aroclor 1221	ND	0.0000250		mg/L	1	7/31/2013 2:49:00 AM
Aroclor 1232	ND	0.0000250		mg/L	1	7/31/2013 2:49:00 AM
Aroclor 1242	ND	0.0000250		mg/L	1	7/31/2013 2:49:00 AM
Aroclor 1248	ND	0.0000250		mg/L	1	7/31/2013 2:49:00 AM
Aroclor 1254	ND	0.0000250		mg/L	1	7/31/2013 2:49:00 AM
Aroclor 1260	ND	0.0000250		mg/L	1	7/31/2013 2:49:00 AM
Surr: Decachlorobiphenyl	86.0	30-150		%REC	1	7/31/2013 2:49:00 AM
Surr: Tetrachloro-m-xylene	46.0	30-150		%REC	1	7/31/2013 2:49:00 AM
TCL VOC				SW8260B		Analyst: AC
VOLATILE ORGANIC COMPOUNDS						
1,1,1-Trichloroethane	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
1,1,2,2-Tetrachloroethane	0.00580	0.00500		mg/L	1	7/30/2013 11:06:00 AM
1,1,2-Trichloroethane	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
1,1-Dichloroethane	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
1,1-Dichloroethene	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
1,2-Dichloroethane	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
1,2-Dichloropropane	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
2-Hexanone	ND	0.0100		mg/L	1	7/30/2013 11:06:00 AM
4-Methyl-2-pentanone	ND	0.0200		mg/L	1	7/30/2013 11:06:00 AM
Acetone	ND	0.0500		mg/L	1	7/30/2013 11:06:00 AM
Benzene	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
Bromodichloromethane	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
Bromoform	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
Bromomethane	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
Carbon disulfide	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
Carbon tetrachloride	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
Chlorobenzene	0.00778	0.00500		mg/L	1	7/30/2013 11:06:00 AM
Chloroethane	ND	0.0100		mg/L	1	7/30/2013 11:06:00 AM
Chloroform	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
Chloromethane	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
cis-1,2-Dichloroethene	0.0984	0.0250		mg/L	1	7/30/2013 1:20:00 PM
cis-1,3-Dichloropropene	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- DF Dilution Factor
- J Analyte detected below quantitation limits
- MDL Method Detection Limit
- ND Not Detected at the Reporting Limit
- PL Permit Limit
- S Spike outside acceptance limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- N Tentatively identified compounds
- O RSD is greater than RSDlimit
- RL Reporting Detection Limit (PQL)



Precision Analytical, Inc.
4450 Johnston Parkway Unit B
Cleveland, OH 44128
TEL: 216 663 0808 FAX: 216 663 0656
Website: www.precisionanalytical.com

Analytical Report

(consolidated)

WO#: 1307645

Date Reported: 8/2/2013

CLIENT: Detrex Corporation Collection Date: 7/25/2013 10:30:00 AM
Project: Flood Plain East, Flood Plain West & State Rd West
Lab ID: 1307645-002 Matrix: AQUEOUS
Client Sample ID: Flood Plain-West

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TCL VOC		SW8260B			Analyst: AC	
VOLATILE ORGANIC COMPOUNDS						
Dibromochloromethane	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
Ethylbenzene	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
m,p-Xylene	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
Methyl ethyl ketone	ND	0.0500		mg/L	1	7/30/2013 11:06:00 AM
Methylene chloride	ND	0.0100		mg/L	1	7/30/2013 11:06:00 AM
o-Xylene	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
Styrene	ND	0.0200		mg/L	1	7/30/2013 11:06:00 AM
Tetrachloroethene	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
Toluene	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
trans-1,2-Dichloroethene	ND	0.0100		mg/L	1	7/30/2013 11:06:00 AM
trans-1,3-Dichloropropene	ND	0.00500		mg/L	1	7/30/2013 11:06:00 AM
Trichloroethene	0.00264	0.00500	J	mg/L	1	7/30/2013 11:06:00 AM
Vinyl acetate	ND	0.0100		mg/L	1	7/30/2013 11:06:00 AM
Vinyl chloride	0.0866	0.00500		mg/L	1	7/30/2013 11:06:00 AM
Surr: 4-Bromofluorobenzene	83.8	80-120		%REC	1	7/30/2013 11:06:00 AM
Surr: Dibromofluoromethane	97.3	80-120		%REC	1	7/30/2013 11:06:00 AM
Surr: Toluene-d8	89.8	80-120		%REC	1	7/30/2013 11:06:00 AM

Qualifiers:	*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
	DF	Dilution Factor	H	Holding times for preparation or analysis exceeded
	J	Analyte detected below quantitation limits	M	Manual Integration used to determine area response
	MDL	Method Detection Limit	N	Tentatively identified compounds
	ND	Not Detected at the Reporting Limit	O	RSD is greater than RSDlimit
	PL	Permit Limit	RL	Reporting Detection Limit (PQL)
	S	Spike outside acceptance limits		



PRECISION
ANALYTICAL, INC.

Precision Analytical, Inc.
4450 Johnston Parkway Unit B
Cleveland, OH 44128
TEL: 216 663 0808 FAX: 216 663 0656
Website: www.precisionanalytical.com

Analytical Report

(consolidated)

WO#: 1307645

Date Reported: 8/2/2013

CLIENT: Detrex Corporation **Collection Date:** 7/25/2013 11:00:00 AM
Project: Flood Plain East, Flood Plain West & State Rd West
Lab ID: 1307645-003 **Matrix:** AQUEOUS
Client Sample ID: State Rd-West

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
PCBS, LIQUID						
					SW8082	Analyst: MIM
POLYCHLORINATED BIPHENYLS (PCBS), LIQUID						
Aroclor 1016	ND	0.0000250		mg/L	1	7/31/2013 3:23:00 AM
Aroclor 1221	ND	0.0000250		mg/L	1	7/31/2013 3:23:00 AM
Aroclor 1232	ND	0.0000250		mg/L	1	7/31/2013 3:23:00 AM
Aroclor 1242	ND	0.0000250		mg/L	1	7/31/2013 3:23:00 AM
Aroclor 1248	ND	0.0000250		mg/L	1	7/31/2013 3:23:00 AM
Aroclor 1254	ND	0.0000250		mg/L	1	7/31/2013 3:23:00 AM
Aroclor 1260	ND	0.0000250		mg/L	1	7/31/2013 3:23:00 AM
Surr: Decachlorobiphenyl	94.0	30-150		%REC	1	7/31/2013 3:23:00 AM
Surr: Tetrachloro-m-xylene	48.0	30-150		%REC	1	7/31/2013 3:23:00 AM
TCL VOC						
					SW8260B	Analyst: AC
VOLATILE ORGANIC COMPOUNDS						
1,1,1-Trichloroethane	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
1,1,2,2-Tetrachloroethane	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
1,1,2-Trichloroethane	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
1,1-Dichloroethane	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
1,1-Dichloroethene	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
1,2-Dichloroethane	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
1,2-Dichloropropane	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
2-Hexanone	ND	0.0100		mg/L	1	7/30/2013 11:39:00 AM
4-Methyl-2-pentanone	ND	0.0200		mg/L	1	7/30/2013 11:39:00 AM
Acetone	ND	0.0500		mg/L	1	7/30/2013 11:39:00 AM
Benzene	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Bromodichloromethane	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Bromoform	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Bromomethane	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Carbon disulfide	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Carbon tetrachloride	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Chlorobenzene	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Chloroethane	ND	0.0100		mg/L	1	7/30/2013 11:39:00 AM
Chloroform	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Chloromethane	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
cis-1,2-Dichloroethene	0.223	0.0250		mg/L	1	7/30/2013 1:53:00 PM
cis-1,3-Dichloropropene	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- DF Dilution Factor
- J Analyte detected below quantitation limits
- MDL Method Detection Limit
- ND Not Detected at the Reporting Limit
- PL Permit Limit
- S Spike outside acceptance limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- M Manual Integration used to determine area response
- N Tentatively identified compounds
- O RSD is greater than RSDlimit
- RL Reporting Detection Limit (PQL)



Precision Analytical, Inc.
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TEL: 216 663 0808 FAX: 216 663 0656
Website: www.precisionanalytical.com

Analytical Report

(consolidated)

WO#: 1307645

Date Reported: 8/2/2013

CLIENT: Detrex Corporation Collection Date: 7/25/2013 11:00:00 AM
Project: Flood Plain East, Flood Plain West & State Rd West
Lab ID: 1307645-003 Matrix: AQUEOUS
Client Sample ID: State Rd-West

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
TCL VOC						
VOLATILE ORGANIC COMPOUNDS						
				SW8260B		Analyst: AC
Dibromochloromethane	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Ethylbenzene	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
m,p-Xylene	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Methyl ethyl ketone	ND	0.0500		mg/L	1	7/30/2013 11:39:00 AM
Methylene chloride	ND	0.0100		mg/L	1	7/30/2013 11:39:00 AM
o-Xylene	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Styrene	ND	0.0200		mg/L	1	7/30/2013 11:39:00 AM
Tetrachloroethene	0.0125	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Toluene	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
trans-1,2-Dichloroethene	ND	0.0100		mg/L	1	7/30/2013 11:39:00 AM
trans-1,3-Dichloropropene	ND	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Trichloroethene	0.0160	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Vinyl acetate	ND	0.0100		mg/L	1	7/30/2013 11:39:00 AM
Vinyl chloride	0.0343	0.00500		mg/L	1	7/30/2013 11:39:00 AM
Surr: 4-Bromofluorobenzene	89.6	80-120		%REC	1	7/30/2013 11:39:00 AM
Surr: Dibromofluoromethane	89.6	80-120		%REC	1	7/30/2013 11:39:00 AM
Surr: Toluene-d8	95.6	80-120		%REC	1	7/30/2013 11:39:00 AM

Qualifiers:

* Value exceeds Maximum Contaminant Level
DF Dilution Factor
J Analyte detected below quantitation limits
MDL Method Detection Limit
ND Not Detected at the Reporting Limit
PL Permit Limit
S Spike outside acceptance limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
M Manual Integration used to determine area response
N Tentatively identified compounds
O RSD is greater than RSDlimit
RL Reporting Detection Limit (PQL)

PRECISION ANALYTICAL, INC.

4450 JOHNSTON PARKWAY, UNIT B • CLEVELAND, OH 44128
(216) 663-0808 • FAX (216) 663-0656

Page 1 of 1

LABORATORY WORK ORDER #

1309645

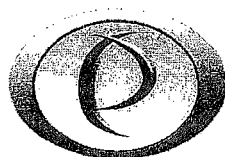
☒ Check if same as Report To

REPORT TO: CONTACT & COMPANY DETREI CORP. San Juan						INVOICE TO: NAME					
ADDRESS 1100 State Rd.						ADDRESS					
CITY ASHTABULA		STATE OH		ZIP CODE 44004		CITY		STATE		ZIP CODE	
PHONE NO. 440-997-6131		FAX NO. 440-992-7904		PHONE NO.		FAX NO.		PO#:		QUOTE #: 70	
EMAIL: ABOEN@DETREI.COM		PROJECT NAME/NUMBER									
Turnaround Time: <input checked="" type="checkbox"/> Std. Rush: <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 72 hr. Authorizing signature						ANALYSIS REQUESTED					
Special Instructions & QC Requirements (additional charge for QC):						TEMP (°C) 4		<div style="display: flex; align-items: center;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">MATRIX</div> <div style="margin-left: 10px;"> PCB TCL VOC </div> </div>			
						VISIBLE ICE (circle) YES NO					
Sample Disposal (A fee will be assessed if samples are retained longer than 1 month & disposed of by lab)											
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months											
NO.	CUSTOMER SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	Comp	Grab	NO. OF CONT.					
1	FLOOD PLAIN - EAST	7-25/13	10 ⁰⁰ AM	K	4	4	A	1	3	-1	
2	FLOOD PLAIN - West	↓	10 ³⁰ AM	K	4	4	A	1	3	-2	
3	STATE ROAD - West	↓	11 ⁰⁰ AM	K	4	4	A	1	3	-3	
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											

Samplers: (Signature) 	Relinquished by: (Signature) 	Date 7/25/13	Time 8:30 AM	Received by: (Signature) 	Relinquished by: (Signature) 	Date 7/26/13	Time 1010
Received by: (Signature) 	Relinquished by: (Signature) 	Date	Time	Received in laboratory by: (Signature) 		Date	Time

Christophe

7/26/13 1010



PRECISION
ANALYTICAL, INC.

Sample Receipt Checklist

Form 244
Rev#: 1
5/21/10

Work Order No. 1307645

RUSH: ☐ Yes ☒ No ☐ NA

Date & Time Received: 7/26/13 1010 Received By: CPW

Date & Time Logged In: 7/26/13 1049 Logged In By: CPW

Date & Time Reviewed: 7/29/13 1059 Reviewed By: JP

Carrier Name: ☒ PAI ☐ UPS ☐ FedEx ☐ Client ☐ Other/Tracking # _____

Samples Analyzed In House? ☒ Yes ☐ No Subbed To _____

Is Chain Of Custody Present? ☒ Yes ☐ No

Is Chain Of Custody Properly Filled Out? ☒ Yes ☐ No

Does Chain Of Custody Match Sample Labels? ☒ Yes ☐ No

Are Samples Past Hold Time? ☐ Yes ☒ No ☐ NA

Are Samples In Proper Containers? ☒ Yes ☐ No Intact? ☒ Yes ☐ No

No. Of Containers? 12 ☒ Glass ☐ Plastic ☐ Baggie ☒ VOA ☐ Micro ☐ Tedlar ☐ Other _____

When Applicable, Is Headspace Present? ☐ Yes ☒ No MSDS Provided ☐ Yes ☐ No

Matrix: ☒ Aqueous ☒ Liquid ☐ Sludge ☐ Solid ☐ Oil ☐ Drinking Water ☐ Soil ☐ Gas ☐ Other _____

On Ice? 6 °C ☒ Yes ☐ No ☐ NA

Are Samples Preserved? ☐ Yes ☐ No ☒ NA

pH Results:

Metals _____ Hardness _____ ☐ HN03

CN _____ ☐ NaOH

COD _____ NH3 _____ Phenol _____ TOC _____ TKN/TON _____ Phos _____ No2No3 _____ ☐ H2S04

Sulfide _____ ☐ NaOH & ZnAcetate

Other _____

Field Data: ☐ pH ☐ Temp ☐ Flow ☐ TRC ☐ TRC Low ☐ Color ☐ Odor ☐ Turbidity ☐ Other _____

Explanation of Comments & Problems:



July 25, 2013

Mr. Owen Thompson
United States Environmental Protection Agency
Office of Superfund, Region 5
SR-6J
77 West Jackson Blvd.
Chicago, IL 60604-3590

Fed Ex Overnight Delivery

Subject: Monthly Report for June 2013
Detailed Status Report
Fields Brook Superfund Site
Detrex Source Area-Ashtabula, Ohio

Dear Mr. Thompson,

As requested, below are descriptions of each of the 12 original DNAPL recovery wells installed in October 2002. Figures identifying existing monitoring and recovery wells and a table summarizing recent DNAPL levels in several wells are attached.

Well 1. Not operable. The well head insert is not able to be repaired. The original insert has corroded and has been replaced at least once. The current well is not able to be pumped. The insert and possibly the casing would have to be replaced.

Well 2. Not operable. The vacuum box is completely corroded. The return line is also corroded from pumping and coming in contact with DNAPL. The return line and vacuum box have to be replaced at a minimum for this well to be operational. Since it has been idle for a long time, the insert and casing may also have to be replaced.

Well 3. Not operable for several years. Not able to hold air pressure. This well would have to be re-installed to become operational.

Well 4. Pumping mostly water, very little DNAPL, and only DNAPL droplets. This well has been plugged before and has been cleared.

Well 5. Not operable. The well head insert is corroded. At a minimum, the insert would have to be replaced and probably the casing as well.

Well 6. Not operable. The well head insert and casing are corroded. Both the casing and insert would have to be replaced.

Well 7. Not operable. The well head insert is corroded. At a minimum, the insert would have to be replaced and probably the casing will have to be replaced to become operational.

Well 8. Operable. Well is dry. No fluids are recovered when it is pumped.

Well 9. Operable. Similar to well four. Only droplets of DNAPL are recovered when pumped.

Well 10. Operable. Similar to wells four and nine.

Well 11. Operable.

Well 12. Not operable. This well was removed in November 2012.

As a note, DNAPL recovery wells 13 and 14 were installed with submersible pumps in 2007 using a modified well screen and installation procedures. These two wells pumped less than five times each before they experienced plugging issues. Obviously, submersible pumps are not appropriate for use in the subsurface at this site. Operation of these wells and the existing 12 recovery wells indicate they have become plugged with silt during recovery.

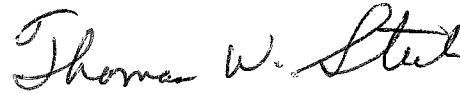
The original material of construction for the transfer lines was polypropylene. The polypropylene lasted about one year. The DNAPL softened the polypropylene. The next material of construction for the transfer lines we tried included stainless steel, which lasted at most two years. The next material we used was carbon steel. The carbon steel lasts about one year. The mechanism of destruction is both corrosion and erosion. The DNAPL corrodes the material then the silt erodes the material, except for the polypropylene which was essentially dissolved. The excessive silt causes erosion. During the past eleven years, we have experienced little success in finding suitable material of construction for pumping and handling DNAPL that is recovered from this site.

Our operational results have shown that the recovery of DNAPL using vertical recovery wells diminishes quickly. Once the DNAPL in the immediate area is recovered, there is very little additional DNAPL recovery that occurs when vacuum is applied to the well. The recovery wells when evacuated have a very small "area of influence".

Due to the difficulty in finding a suitable material of construction for long term pumping and handling, severe plugging problems due to produced silt, diminishing returns from recovery wells that do recover DNAPL, and demonstrated lack of movement of the DNAPL off Detrex's site, it is Detrex's recommendation that no further recovery activities take place. The DNAPL at the Detrex Site is entrenched in the low permeability clay soils on site. Monitoring data from monitoring wells and the existing groundwater collection trench indicate there is no movement of DNAPL off site towards Fields Brook.

If you have any questions, please contact me at (440) 997-6131, ext. 201.

Sincerely,

A handwritten signature in black ink, reading "Thomas W. Steib". The signature is written in a cursive style with a large, stylized 'T' and 'S'.

Thomas W. Steib
Vice President Manufacturing

cc: T. Doll, D. Church, R. Currie, J. Vence, K. Buell, URS, R. Williams



July 25, 2013

Submitted Via Federal Express

Mr. W. Owen Thompson
Remedial Project Manager
Superfund Remedial Response Section Seven
U.S. EPA Region 5, SR-6J
77 W. Jackson Blvd.
Chicago, IL 60604

Subject: Additional Figures and Summary Tables of
DNAPL Measurements
Detrex Source Control Area – Fields Brook Superfund Site
Detrex Corporation, Ashtabula, Ohio
Docket No. V-W-98-C-450

Dear Mr. Thompson:

On behalf of Detrex Corporation, URS Corporation (URS) is submitting the additional figures and summary tables of DNAPL measurements that were referenced in Tom Steib's letter to you dated July 19, 2013.

An overview of the information provided in this email is as follows:

- Figure 1. This figure provides locations of the original 14 recovery wells and the 6 new recovery wells installed in 2013. Also, monitoring wells used for Detrex quarterly monitoring reports are shown.
- Figure 2. This figure provides locations of monitoring wells that have been installed at the site that have been used for DNAPL monitoring. These wells include Source Control RI wells installed in 1993, DNAPL Pilot Test wells installed in 1997 along with monitoring wells installed during subsequent studies in 1995, 2008, and 2012.
- Table 1. This table provides a summary of DNAPL measurements that have been recorded since the completion of the DNAPL recovery testing program in January 2013. The table provides DNAPL thickness measurements collected in February, March, and July 2013.

The DNAPL monitoring data in this table indicates that there is considerable difference in DNAPL thicknesses in both the Northern and Southern areas of the site. This variation is related to several factors, which include well diameter, well screen length, position of the screen in the clay / backfill soil materials, length of sand pack, and length of time since the well has been bailed.

URS Corporation
1375 Euclid Avenue
Suite 600
Cleveland, OH 44115
Tel: 216.622.2400
Fax: 216.622.2464

www.urscorp.com c:\users\tomp\appdata\local\microsoft\windows\temporary internet files\content.outlook\0iqcwp21\othompsonaddlfigstblsdnaplsummary_072513.docx



Mr. W. Owen Thompson
United States Environmental Protection Agency
July 25, 2013
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Based on our experience at DNAPL sites and procedures referenced by experts in the study of DNAPL, the DNAPL thickness in a well cannot be used to determine the volume of DNAPL in the subsurface. In support of this statement, please note that Pankow and Cherry have discussed the issue of calculating DNAPL volumes and interpreting thickness of DNAPL in monitoring wells in their textbook on DNAPL. (Pankow, Cherry, 1997). The following excerpt was taken from their book, "Dense Chlorinated Solvents and other DNAPLs in Groundwater", Section 13.3.2 Observations in Wells:

"At some sites, DNAPL can be found in one or more monitoring or pump-and-treat wells. Although this finding confirms that the site is a DNAPL site, it is generally impossible to relate the thickness of DNAPL in such wells to the volume of DNAPL in such wells to the volume of DNAPL in the subsurface. In addition, it is generally not possible relate the finding of DNAPL in wells to the vertical distribution of DNAPL in the subsurface. The only circumstance in which it might be possible to relate DNAPL thickness in wells to the thickness of DNAPL pools in the subsurface is when DNAPL occurs in large discrete pools in granular media. This has been found at some creosote and coal tar sites where vary large volumes of product have been released to the subsurface, but it is rare for chlorinated solvent DNAPL sites. Even when large pools of solvent are found, wells must be installed precisely to intersect the entire vertical thickness of the pool. If the wells do not extend to the full thickness of the pool, the observed DNAPL thickness will be erroneously small. If the wells extend deeper than the base of the pool, the observed DNAPL thickness will be erroneously large. And, even wells are installed appropriately within the pool, the DNAPL thickness in the well can only be related to the pool thickness through the use of information on the capillary properties of the formation and of the well material, together with the properties of the DNAPL. This type of information is seldom available."

In summary, a review of site data along with monitoring procedures established by DNAPL experts indicate that the thickness of DNAPL in wells cannot be used to estimate volume or vertical distribution of DNAPL in the subsurface. Also, based on the plethora of subsurface characterization data that has been collected by Detrex since 2005 (i.e. 1,500 ft. long groundwater collection trench, test pits, soil borings, monitoring wells, MIP data, 6 additional DNAPL recovery wells, and many monitoring points), the geologic conditions at the Detrex Site consist of predominately lacustrine clay soils having low permeability typical of aquitards and not granular media. The DNAPL thickness mapping provided by FBAG on Figure 1 of their letter dated April 12, 2013 along with their estimate of 150,000 gallons of DNAPL is highly inaccurate, erroneous and not consistent with established technical protocol.



Mr. W. Owen Thompson
United States Environmental Protection Agency
July 25, 2013
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If you have any questions regarding the information provided in this letter report, please do not hesitate to contact me at 216-622-2432 or Tom Steib at 440-997-6131 at your convenience.

Sincerely,

URS Corporation - Ohio

A handwritten signature in black ink that reads "Martin L. Schmidt". The signature is written in a cursive, flowing style.

Martin L. Schmidt, Ph.D.
Vice President

cc: R. Currie – Detrex Corporation
T. Steib – Detrex Corporation
T. Doll - Detrex Corporation
R. Williams – Ohio EPA
P. Felitti, U.S. EPA
W. Earle – SulTRAC

Table 1B
Southern Area DNAPL Thickness Summary
Detrex Corporation, Ashtabula, Ohio

Well ID	Well Size (inches diameter)	Screen Length (feet)	2/5/2013 (ft.)	3/14/2013 (ft.)	7/2/2013 (ft.)
DETMW-07S	2	9.5-19.5	2.10	2.20	2.51
DETMW-08S	2	9.5-19.5	3.10 ¹	2.50 ¹	2.12 ¹
DETMW-09	2	7-17	1.65	1.35	1.42
DETMW-10	2	7-17	1.10	0.75	0.80
RW-18	6	14-18	0.00	0.00	0.00
RW-19	6	12-16	2.95 ¹	4.45 ¹	5.90 ¹
RW-20	6	12-16	0.00 ¹	0.00 ¹	2.90 ¹
MP-18A	1	12-16	2.30	3.15	3.40
MP-18B	1	12-16	9.15	9.60	9.73
MP-19A	1	12-16	8.90	6.45	5.80
MP-19B	1	12-16	6.10	3.05	3.15
MP-20A	1	12-16	0.75	1.45	3.38
MP-20B	1	12-16	4.15	4.70	4.70
MP-20C	1	12-16	0.00	0.00	0.00
MP-20D	1	12-16	8.80	8.80	9.10
MP-20E	1	12-16	5.60	6.25	6.73
MP-20F	1	12-16	9.05	9.30	9.10
MP-20G	1	17-18	4.15	4.55	5.08
NPZ-20-1	1	17-18	0.00	0.00	0.00
NPZ-20-2	1	16-17	0.00	0.00	0.00
NPZ-20-3	1	15-16	0.00	0.00	0.00
NPZ-20-4	1	14-15	0.00	0.00	0.00
NPZ-20-5	1	13-14	0.00	0.00	0.00
NPZ-20-6	1	12-13	0.00	0.00	0.00
NPZ-20-7	1	11-12	0.00	0.00	0.00
NPZ-20-8	1	10-11	0.05	0.05	0.20
GP-15	1	10-20	3.95 ¹	3.10 ¹	4.75 ¹
DPT-3/0209	1	5-15	0.30	0.30	0.30
ORW-1	6	9-24	13.25	12.80 ²	12.25 ²
ORW-1-MP-N	2	8-23	0.00 ¹	6.70	6.60
ORW-1-MP-W	2	9-24	11.60	11.65	12.25
ORW-1-MP-E	2	8-23	9.50	9.50	11.02 ¹
ORW-1-MP-S	2	9-24	12.40	12.60	13.30

NOTE:

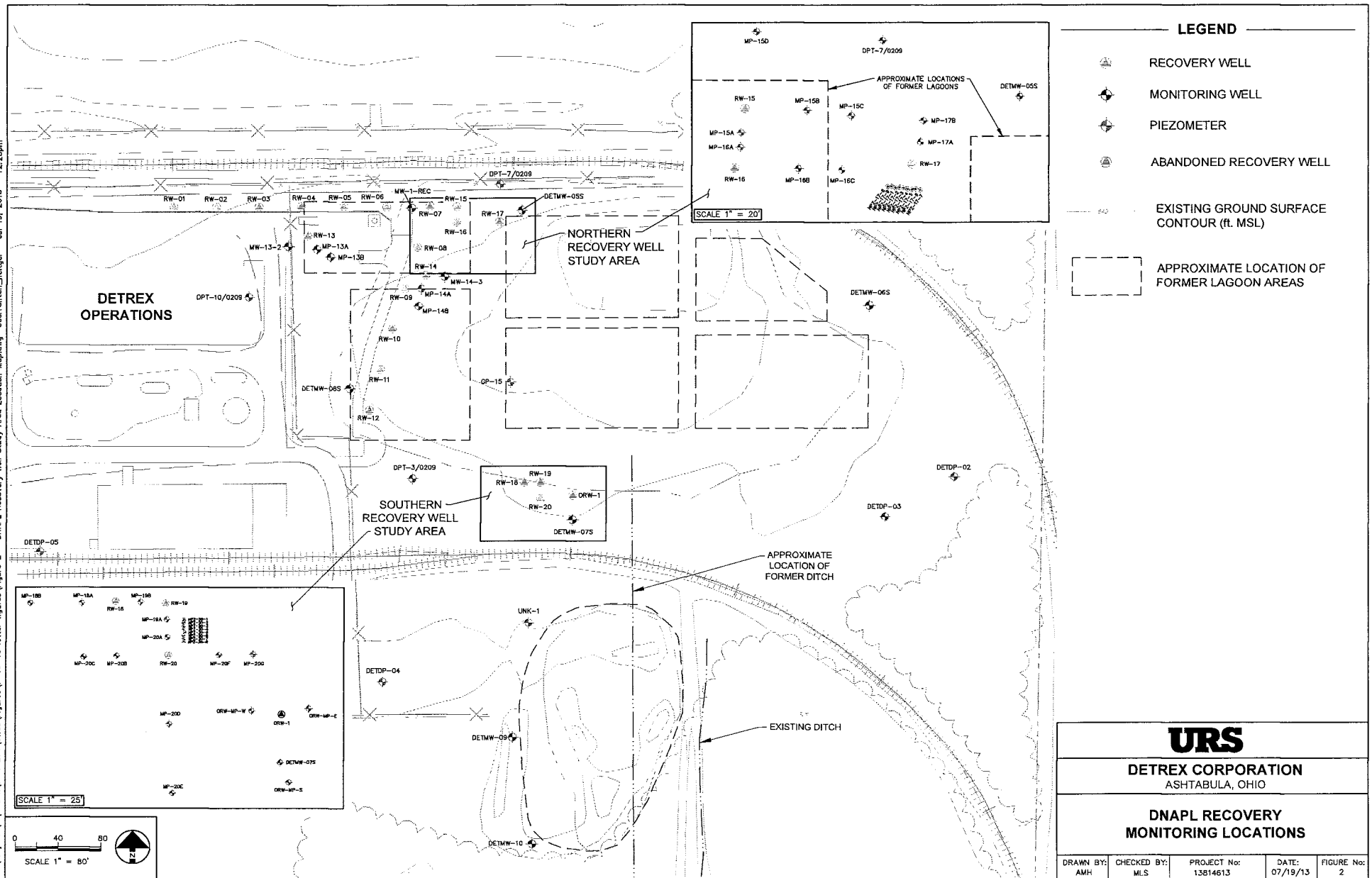
1. Well measurement potentially incorrect due to emulsified interface
2. Well accumulated 0.15 feet of silt and 1.30 silt between each gauging event.

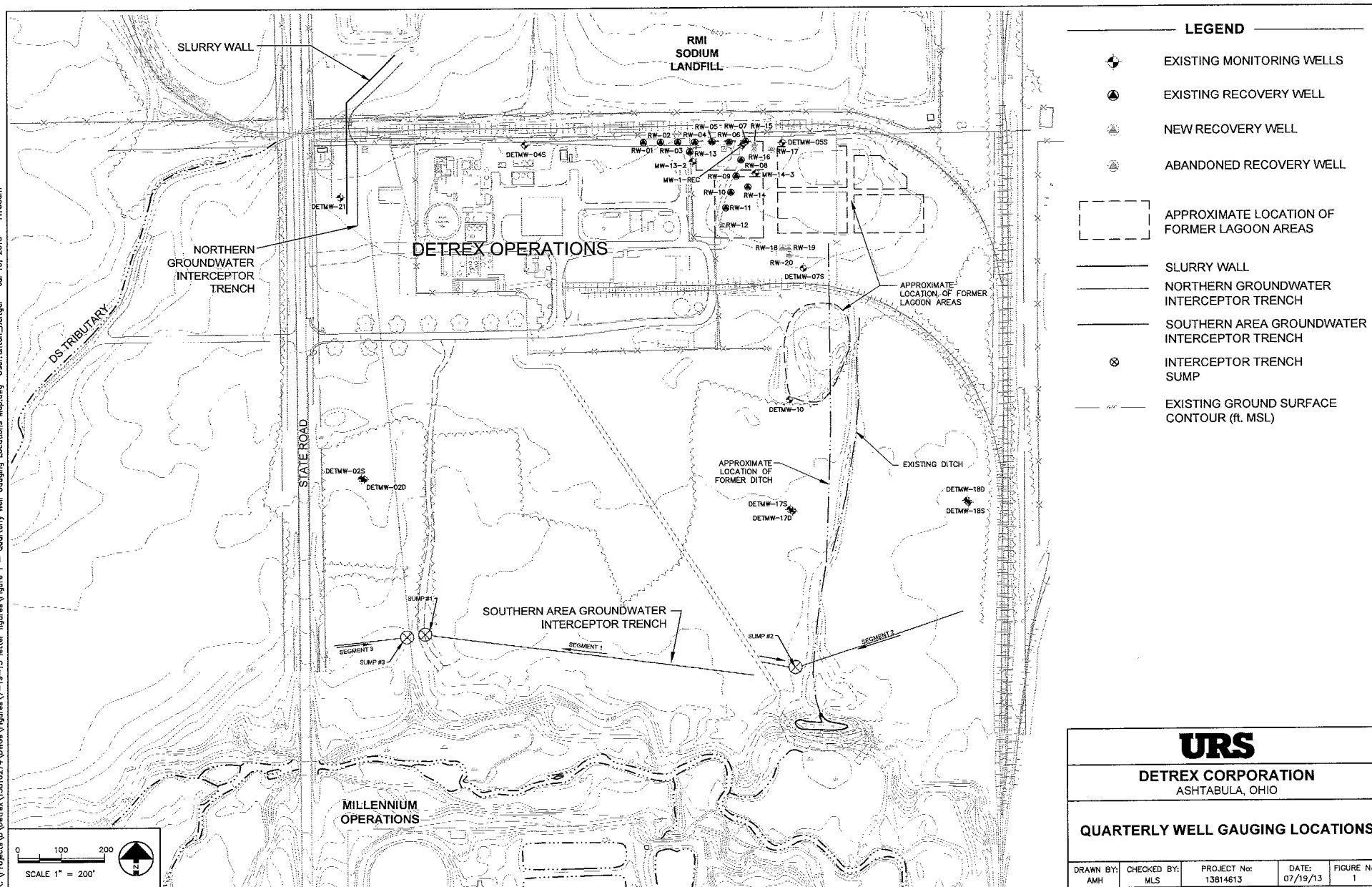
Table 1A
Northern Area DNAPL Thickness Summary
Detrex Corporation, Ashtabula, Ohio

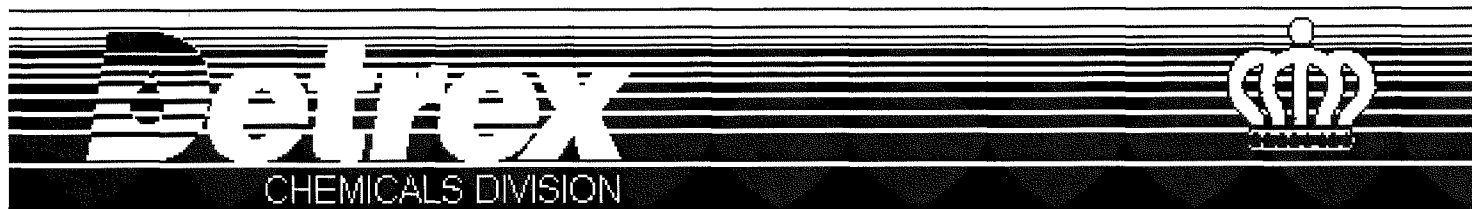
Well ID	Well Size (inches diameter)	Screen Length (feet)	2/5/2013 (ft.)	3/14/2013 (ft.)	7/2/2013 (ft.)
MW-1-REC	2	10-25	1.20	1.25	1.18
MW-13-2	2	10-20	3.15	2.95	2.75
MW-14-3	2	10-23	4.60	4.15	6.05 ¹
DETMW-05S	2	9-19	5.65	5.20	5.85
DETMW-06S	2	7.5-17.5	4.30	4.00	4.17
DPT-7/0209	1	15-25	0.00 ¹	0.00 ¹	1.45
DPT-10/0209	1	5-15	0.00	0.00	0.00
RW-15	6	18-22	2.00	0.00 ¹	2.80
RW-16	6	18-22	1.65	3.35	4.60
RW-17	6	19-23	1.10	2.85	5.18
MP-15A	1	18-22	6.00	6.90	6.70
MP-15B	1	18-22	13.35	13.85	0.75 ³
MP-15C	1	18-22	9.65	10.30	0.09 ³
MP-15D	1	18-22	0.00 ¹	2.85 ¹	0.00 ¹
MP-16A	1	18-22	9.40	10.00	10.05
MP-16B	1	18-22	7.50	7.15	6.94
MP-16C	1	18-22	5.95 ¹	7.60	7.58
MP-17A	1	19-23	2.60	2.95	3.40
MP-17B	1	19-23	5.15	6.60	3.05 ⁴
NPZ-17-1	1	17-18	8.65	9.50	9.50
NPZ-17-2	1	18-19	7.20	8.80	8.87
NPZ-17-3	1	19-20	3.60	4.35	4.67
NPZ-17-4	1	20-21	2.10	2.90	2.70
NPZ-17-5	1	21-22	2.50	4.40	4.46
NPZ-17-6	1	22-23	3.40	5.90	5.93
NPZ-17-7	1	23-24	0.00	0.00	0.00
NPZ-17-8	1	16-17	1.30	1.05	4.73 ¹
NPZ-17-9	1	15-16	5.45	6.00	2.03 ¹

NOTE:

1. Well measurement potentially incorrect due to emulsified interface
2. Bottom of well measurement collected prior to cleaning out silt from well in March 2013.
3. Well accumulated over 10 feet of silt between March gauging event and July gauging event.
4. Well accumulated approximately 3.70 feet of silt between March gauging event and July gauging event.







June 3, 2013

Mr. Owen Thompson
United States Environmental Protection Agency
Office of Superfund, Region 5
SR-6J
77 West Jackson Blvd.
Chicago, IL 60604-3590

Certified Mail, Return Receipt: 7004 1160 0003 4669 1866

Subject: Monthly Status Report-May 2013
Fields Brook Superfund Site
Detrex Source Area-Ashtabula, Ohio

Dear Mr. Thompson,

Detrex is submitting the enclosed monthly status report for the month of May 2013, for the Detrex Source Area Project.

If you have any questions, please contact me at (440) 997-6131, ext. 201.

Sincerely,

Thomas W. Steib
Vice President Manufacturing

cc: T. Doll, D. Church, R. Currie, J. Vence, K. Buell, URS, R. Williams

FIELDS BROOK SUPERFUND SITE, OPERABLE UNIT #2
DETREX SOURCE AREA
MONTHLY TECHNICAL STATUS REPORT

Project Phase: Remedial Design and Remedial Action.

Prepared by: Tom Steib of Detrex Corporation.

Period: Month of May 2013.

1. Progress Made This Reporting Period:

ACTIVITY	THIS PERIOD GALLONS	YEAR TO DATE GALLONS	TOTAL GALLONS
Estimated DNAPL Recovered	550 (Does not include volume in inside settling tank)	550	18,030
DNAPL Disposed	-0-	-0-	17,480

- A. There were 550 gallons of DNAPL pumped into totes and ready for disposal.
- B. Only wells 1, 2, 10, and 11 are working. Many wells became unable to be pumped due to inactivity during the pump down of the experimental wells.
- C. Wells 12 and 14 were taken out to inspect sand pack, etc during experimental well installation in October 2012.
- D. Please see attached updated results of collection trench, flood plain, sample wells, and depth of DNAPL in the sample wells.
- E. NPDES Compliance. Detrex is in full compliance of our NPDES permit for the month of May 2013. A copy of the MOR is available upon request.

2. Work Planned During the Next 90 Days.

- A. Due to the inactivity of the wells during the pump down of the six experimental wells, many of the current wells are inoperable. Effort will be made to bring as many wells into operation as possible pending final decision from US EPA as to the direction forward.

6/11/2013 13:29

Detrex Collection Trench Analyses

Note: Collection Trench #1 is the middle sump.

Collection Trench #2 is the eastern sump.

Collection Trench #3 is the western sump. Sump #3 pumps into Sump #1.

Date Sampled	1/11/2013	1/11/2013	1/11/2013
Sump Number	1	2	3
VOC			
1,1,1-Trichloroethane, ug/l	<5.00	<5.00	<5.00
1,1,2,2-Tetrachloroethane, ug/l	<5.00	<5.00	<5.00
1,1,2-Trichloroethane, ug/l	<5.00	<5.00	<5.00
1,1-Dichloroethane, ug/l	<5.00	<5.00	<5.00
1,1-Dichloroethene, ug/l	<5.00	<5.00	<5.00
1,2-Dichloroethane, ug/l	<5.00	<5.00	<5.00
Choroform, ug/l	<5.00	<5.00	<5.00
cis-1,2-Dichloroethene, ug/l	<5.00	13.3	<5.00
Methylene Chloride, ug/l	<10.0	<10.0	<10.0
Tetrachloroethene, ug/l	<5.00	<5.00	<5.00
trans-1,2-Dichloroethene, ug/l	<10.0	<10.0	<10.0
Trichloroethene, ug/l	<5.00	15.7	<5.00
SVOC			
Date Sampled	1/11/2013	1/11/2013	1/11/2013
1,2,4-Trichlorobenzene, ug/l	<10.0	<10.0	<10.0
1,2-Dichlorobenzene, ug/l	<10.0	<10.0	<10.0
1,3-Dichlorobenzene, ug/l	<10.0	<10.0	<10.0
1,4-Dichlorobenzene, ug/l	<10.0	<10.0	<10.0
Hexachlorobenzene, ug/l	<10.0	<10.0	<10.0
Hexachlorobutadiene, ug/l	<10.0	<10.0	<10.0
Hexachloroethane, ug/l	<10.0	<10.0	<10.0

Note: Collection Trench #1 is the middle sump.

Collection Trench #2 is the eastern sump.

Collection Trench #3 is the western sump. Sump #3 pumps into Sump #1.

Date Sampled	10/4/2012	10/4/2012	10/4/2012
Sump Number	1	2	3
VOC			
1,1,1-Trichloroethane, ug/l	<5.00	<5.00	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.00	34.1	<5.0
1,1,2-Trichloroethane, ug/l	<5.00	<5.00	<5.0
1,1-Dichloroethane, ug/l	<5.00	<5.00	<5.0
1,1-Dichloroethene, ug/l	<5.00	<5.00	<5.0
1,2-Dichloroethane, ug/l	<5.00	<5.00	<5.0
Choroform, ug/l	<5.00	<5.00	<5.0
cis-1,2-Dichloroethene, ug/l	5.2	106	<5.0

Methylene Chloride, ug/l	<10.0	<10.0	<10.0
Tetrachloroethene, ug/l	12.6	9.83	<5.0
trans-1,2-Dichloroethene, ug/l	<10.0	<10.0	<5.0
Trichloroethene, ug/l	26.5	63.1	<5.0
SVOC			
Date Sampled	10/4/2012	10/4/2012	10/4/2012
1,2,4-Trichlorobenzene, ug/l	<10.0	<10.0	<10.0
1,2-Dichlorobenzene, ug/l	<10.0	<10.0	<10.0
1,3-Dichlorobenzene, ug/l	<10.0	<10.0	<10.0
1,4-Dichlorobenzene, ug/l	<10.0	<10.0	<10.0
Hexachlorobenzene, ug/l	<10.0	<10.0	<10.0
Hexachlorobutadiene, ug/l	<10.0	<10.0	<10.0
Hexachloroethane, ug/l	<10.0	<10.0	<10.0

Note: Collection Trench #1 is the middle sump.
Collection Trench #2 is the eastern sump.
Collection Trench #3 is the western sump. Sump #3 pumps into Sump #1.

Date Sampled	10/12/2011	10/12/2011	10/12/2011
Sump Number	1	2	3
VOC			
1,1,1-Trichloroethane, ug/l	<5.00	<5.00	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.00	<5.00	<5.0
1,1,2-Trichloroethane, ug/l	<5.00	<5.00	<5.0
1,1-Dichloroethane, ug/l	<5.00	<5.00	<5.0
1,1-Dichloroethene, ug/l	<5.00	<5.00	<5.0
1,2-Dichloroethane, ug/l	<5.00	<5.00	<5.0
Chloroform, ug/l	<5.00	<5.00	<5.0
cis-1,2-Dichloroethene, ug/l	<5.00	9.65	<5.0
Methylene Chloride, ug/l	<10.0	<10.0	<10.0
Tetrachloroethene, ug/l	7.61	9.3	<5.0
trans-1,2-Dichloroethene, ug/l	<10.0	<10.0	<5.0
Trichloroethene, ug/l	6.56	38.8	<5.0
SVOC			
Date Sampled	10/12/2011	10/12/2011	10/12/2011
1,2,4-Trichlorobenzene, ug/l	<10.0	<10.0	<10.0
1,2-Dichlorobenzene, ug/l	<10.0	<10.0	<10.0
1,3-Dichlorobenzene, ug/l	<10.0	<10.0	<10.0
1,4-Dichlorobenzene, ug/l	<10.0	<10.0	<10.0
Hexachlorobenzene, ug/l	<10.0	<10.0	<10.0
Hexachlorobutadiene, ug/l	<10.0	<10.0	<10.0
Hexachloroethane, ug/l	<10.0	<10.0	<10.0

Note: Collection Trench #1 is the middle sump.
Collection Trench #2 is the eastern sump.
Collection Trench #3 is the western sump. Sump #3 pumps into Sump #1.

Date Sampled	4/1/2011	4/1/2011	4/1/2011
Sump Number	1	2	3
VOC			

6/11/2013 13:30

Fields Brook Flood Plain and North Sewer Collection Trench Water Analyses
Ashtabula, OH
Samples taken by Detrex.
Samples analyzed by Precision Analytical, Inc.

Date Sampled	1/16/2013	1/16/2013	1/16/2013
Location	Flood Plain	Flood Plain	North
	East	West	Sewer
VOC			
1,1,1-Trichloroethane, ug/l	<5.00	<5.00	<5.00
1,1,2,2-Tetrachloroethane, ug/l	1.84	2.11	<5.00
1,1,2-Trichloroethane, ug/l	<5.00	<5.00	<5.00
1,1-Dichloroethane, ug/l	<5.00	<5.00	<5.00
1,1-Dichloroethene, ug/l	<5.00	<5.00	<5.00
Chloroform, ug/l	<5.00	<5.00	<5.00
cis-1,2-Dichloroethene, ug/l	620	103.0	99
Methylene Chloride, ug/l	<10.00	<10.00	<10.00
Tetrachloroethene, ug/l	<5.00	<5.00	7.42
Trichloroethene, ug/l	18.1	23.7	14.9
PCB			
Aroclor 1016, ug/l	<2.00	<2.00	<2.00
Aroclor 1221, ug/l	<2.00	<2.00	<2.00
Aroclor 1232, ug/l	<2.00	<2.00	<2.00
Aroclor 1242, ug/l	<2.00	<2.00	<2.00
Aroclor 1248, ug/l	<2.00	<2.00	<2.00
Aroclor 1254, ug/l	<2.00	<2.00	<2.00
Aroclor 1260, ug/l	<2.00	<2.00	<2.00

Date Sampled	10/24/2012	10/24/2012	10/24/2012
Location	Flood Plain	Flood Plain	North
	East	West	Sewer

VOC			
1,1,1-Trichloroethane, ug/l	<5.00	<5.00	<5.00
1,1,2,2-Tetrachloroethane, ug/l	<5.00	<5.00	<5.00
1,1,2-Trichloroethane, ug/l	<5.00	<5.00	<5.00
1,1-Dichloroethane, ug/l	<5.00	<5.00	<5.00
1,1-Dichloroethene, ug/l	<5.00	<5.00	<5.00
Choroform, ug/l	<5.00	<5.00	<5.00
cis-1,2-Dichloroethene, ug/l	<5.00	14.1	7
Methylene Chloride, ug/l	<10.00	<10.00	<10.00
Tetrachloroethene, ug/l	<5.00	<5.00	8.14
Trichloroethene, ug/l	<5.00	6.78	10.9
PCB			
Aroclor 1016, ug/l	<2.00	<2.00	<2.00
Aroclor 1221, ug/l	<2.00	<2.00	<2.00
Aroclor 1232, ug/l	<2.00	<2.00	<2.00
Aroclor 1242, ug/l	<2.00	<2.00	<2.00
Aroclor 1248, ug/l	<2.00	<2.00	<2.00
Aroclor 1254, ug/l	<2.00	<2.00	<2.00
Aroclor 1260, ug/l	<2.00	<2.00	<2.00

Date Sampled	10/24/2012	10/24/2012	10/24/2012
Location	Flood Plain	Flood Plain	North
	East	West	Sewer
VOC			
1,1,1-Trichloroethane, ug/l	<5.00	<5.00	<5.00
1,1,2,2-Tetrachloroethane, ug/l	6.68	6.85	15.7
1,1,2-Trichloroethane, ug/l	<5.00	<5.00	<5.00
1,1-Dichloroethane, ug/l	<5.00	<5.00	<5.00
1,1-Dichloroethene, ug/l	<5.00	6.13	<5.00
Choroform, ug/l	<5.00	<5.00	<5.00
cis-1,2-Dichloroethene, ug/l	354	541	387
Methylene Chloride, ug/l	<10.00	<10.00	<10.00
Tetrachloroethene, ug/l	7.96	30.9	30.4
Trichloroethene, ug/l	127	200	172
PCB			

Detrex Ashtabula, OH DNAPL Well VOC Analyses

June 11, 2013

Date Sampled	01/17/13	01/17/13	01/17/13	01/17/13	01/17/13	01/17/13	01/17/13	01/17/13	01/17/13
Well Number	MW-21	MW-02S	MW-04S	MW-10	MW-17S	MW-18S	RMI-N	RMI-S	Trip Blank
VOC									
1,1,1-Trichloroethane, ug/l	<5.00	<5.00	<250	<250	<5.00	<5.00	<5.00	<5.00	<5.00
1,1,2,2-Tetrachloroethane, ug/l	<5.00	<5.00	<250	1,340	<5.00	<5.00	<5.00	<5.00	<5.00
1,1,2-Trichloroethane, ug/l	<5.00	<5.00	<250	<250	<5.00	<5.00	<5.00	8.33	<5.00
1,1-Dichloroethene, ug/l	<5.00	<5.00	1,020	<250	<5.00	<5.00	<5.00	6.09	<5.00
Choroform, ug/l	<5.00	<5.00	<250	<250	<5.00	<5.00	<5.00	<5.00	<5.00
Methylene Chloride, ug/l	<10.0	<10.0	<500	<500	<10.0	<10.0	<10.0	<10.0	<10.0
Trichloroethene, ug/l	<5.00	<5.00	45,100	56,900	<5.00	<5.00	<5.00	2,530	<5.00

Date Sampled	11/07/12	11/07/12	11/07/12	11/07/12	11/07/12	11/07/12	11/07/12	11/07/12	11/07/12
Well Number	MW-21	MW-02S	MW-04S	MW-10	MW-17S	MW-18S	RMI-N	RMI-S	Trip Blank
VOC									
1,1,1-Trichloroethane, ug/l	<5.0	<5.0	<250	<250	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<5.0	<250	2,620	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane, ug/l	<5.0	<5.0	<250	<250	<5.0	<5.0	<5.0	6.22	<5.0
1,1-Dichloroethene, ug/l	<5.0	<5.0	1,180	<250	<5.0	<5.0	<5.0	<5.0	<5.0
Choroform, ug/l	<5.0	<5.0	268	375	<5.0	<5.0	<5.0	5.1	<5.0
Methylene Chloride, ug/l	<10.0	<10.0	<1,000	<500	<10.0	<10.0	<10.0	<10.0	<10.0
Trichloroethene, ug/l	<5.0	<5.0	46,700	51,200	<5	<5.0	<5.0	2,400	<5.0

Date Sampled	07/12/12	07/12/12	07/12/12	07/12/12	07/12/12	07/12/12	07/12/12	07/12/12	07/12/12
Well Number	MW-21	MW-02S	MW-04S	MW-10	MW-17S	MW-18S	RMI-N	RMI-S	Trip Blank
VOC									
1,1,1-Trichloroethane, ug/l	<5.0	<5.0	<500	<500	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<5.0	<500	1,260	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane, ug/l	<5.0	<5.0	<500	<500	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene, ug/l	<5.0	<5.0	959	<500	<5.0	<5.0	<5.0	<5.0	<5.0
Choroform, ug/l	<5.0	<5.0	<500	<500	<5.0	<5.0	<5.0	<5.0	<5.0
Methylene Chloride, ug/l	<10.0	<10.0	<1,000	<1,000	<10.0	<10.0	<10.0	<10.0	<10.0

Trichloroethene, ug/l	<5.0	<5.0	37,000	49,100	<5	<5.0	<5.0	386	<5.0
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Date Sampled	04/20/12	04/20/12	04/20/12	04/20/12	04/20/12	04/20/12	04/20/12	04/20/12	04/20/12
Well Number	MW-21	MW-02S	MW-04S	MW-10	MW-17S	MW-18S	RMI-N	RMI-S	Trip Blank
VOC									
1,1,1-Trichloroethane, ug/l	<5.0	<5.0	<500	<500	<5.0	<5.0	<5.0	<25.0	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<5.0	<500	1,820	<5.0	<5.0	<5.0	<25.0	<5.0
1,1,2-Trichloroethane, ug/l	<5.0	<5.0	<500	<500	<5.0	<5.0	<5.0	<25.0	<5.0
1,1-Dichloroethene, ug/l	<5.0	<5.0	973	<500	<5.0	<5.0	<5.0	<25.0	<5.0
Choroform, ug/l	<5.0	<5.0	<500	<500	<5.0	<5.0	<5.0	<25.0	<5.0
Methylene Chloride, ug/l	<10.0	<10.0	<1,000	<1,000	<10.0	<10.0	<10.0	<50.0	<10.0
Trichloroethene, ug/l	<5.0	<5.0	38,500	49,400	<5	<5.0	<5.0	91	<5.0

Date Sampled	01/11/12	01/11/12	01/11/12	01/11/12	01/11/12	01/11/12	01/11/12	01/11/12	01/11/12
Well Number	MW-21	MW-02S	MW-04S	MW-10	MW-17S	MW-18S	RMI-N	RMI-S	Trip Blank
VOC									
1,1,1-Trichloroethane, ug/l	<5.0	<5.0	<250	<250	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<5.0	<250	2,410	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane, ug/l	<5.0	<5.0	<250	<250	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene, ug/l	<5.0	<5.0	1,160	<250	<5.0	<5.0	<5.0	<5.0	<5.0
Choroform, ug/l	<5.0	<5.0	<250	<250	<5.0	<5.0	<5.0	<5.0	<5.0
Methylene Chloride, ug/l	<10.0	<10.0	<500	<500	<10.0	<10.0	<10.0	<10.0	<10.0
Trichloroethene, ug/l	<5.0	<5.0	39,700	45,600	<5.0	<5.0	<5.0	459	<5.0

Date Sampled	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11	10/13/11
Well Number	MW-21	MW-02S	MW-04S	MW-10	MW-17S	MW-18S	RMI-N	RMI-S	Trip Blank
VOC									
1,1,1-Trichloroethane, ug/l	<5.0	<5.0	<250	<250	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2,2-Tetrachloroethane, ug/l	<5.0	<5.0	<250	2,040	<5.0	<5.0	<5.0	<5.0	<5.0
1,1,2-Trichloroethane, ug/l	<5.0	<5.0	<250	<250	<5.0	<5.0	<5.0	<5.0	<5.0
1,1-Dichloroethene, ug/l	<5.0	<5.0	<250	<250	<5.0	<5.0	<5.0	5.12	<5.0
Choroform, ug/l	<5.0	<5.0	<250	<250	<5.0	<5.0	<5.0	<5.0	<5.0
Methylene Chloride, ug/l	<10.0	<10.0	<500	<500	<10.0	<10.0	<10.0	<10.0	<10.0
Trichloroethene, ug/l	<5.0	<5.0	34,200	37,200	<5.0	<5.0	<5.0	1,800	<5.0

Detrex Ashtabula, OH Well Water and DNAPL Levels

June 11, 2013

April 11, 2013				
Well	Depth	Depth	Depth to	Depth of
Number	To Water	to DNAPL	Bottom	DNAPL
RMW-1	3.40	20.40	23.70	3.30
RMW-2	4.90	20.90	23.70	2.80
RMW-3	5.60	19.90	24.50	4.60
MW-7	5.50	10.50	12.70	2.20
MW-10	4.70	None	19.80	None
MW-02S	2.90	None	14.90	None
MW-02D	5.80	None	52.40	None
MW-04S	7.10	None	16.50	None
MW-17D	7.20	None	50.70	None
MW-17S	3.50	None	17.20	None
MW-18D	8.40	None	52.80	None
MW-18S	1.90	None	17.00	None
MW-21	4.40	None	28.10	None
SLURRY NORTH	7.90	None	17.30	None
SLURRY SOUTH	9.00	None	21.40	None

Note: Depths measured in feet from top of outer protective casing.

November 7, 2012				
Well	Depth	Depth	Depth to	Depth of
Number	To Water	to DNAPL	Bottom	DNAPL
RMW-1	4.30	21.90	26.50	4.60
RMW-2	5.10	20.30	23.60	3.30
RMW-3	7.60	17.40	24.70	7.30
MW-7	4.50	None	12.60	#####
MW-10	10.60	None	19.70	None
MW-02S	4.00	None	14.90	None
MW-02D	5.60	None	52.20	None
MW-04S	7.60	None	16.50	None
MW-17D	6.60	None	50.30	None
MW-17S	16.70	None	17.20	None
MW-18D	9.40	None	52.50	None
MW-18S	15.40	None	17.10	None
MW-21	3.50	None	28.20	None
SLURRY NORTH	10.30	None	17.40	None
SLURRY SOUTH	8.40	None	21.40	None

Note: Depths measured in feet from top of outer protective casing.

July 12, 2012				
Well	Depth	Depth	Depth to	Depth of
Number	To Water	to DNAPL	Bottom	DNAPL
RMW-1	4.50	20.20	26.60	6.40
RMW-2	5.50	None	23.70	#####
RMW-3	9.90	15.00	24.30	9.30
MW-7	7.80	9.30	12.80	3.50
MW-10	7.40	None	19.90	None
MW-02S	9.80	None	15.00	None
MW-02D	5.70	None	52.30	None
MW-04S	6.70	None	16.70	None
MW-17D	3.70	None	50.30	None
MW-17S	14.60	None	17.20	None
MW-18D	3.80	None	52.50	None
MW-18S	12.10	None	13.90	None
MW-21	6.90	None	28.10	None
SLURRY NORTH	8.90	None	17.40	None
SLURRY SOUTH	9.20	None	21.60	None

Note: Depths measured in feet from top of outer protective casing.

April 19, 2012				
Well	Depth	Depth	Depth to	Depth of
Number	To Water	to DNAPL	Bottom	DNAPL
RMW-1	3.80	None	26.60	#####
RMW-2	5.40	None	23.50	#####
RMW-3	6.50	None	24.50	#####
MW-7	3.50	None	12.50	#####
MW-10	4.60	None	19.80	None
MW-02S	4.10	None	14.90	None
MW-02D	5.80	None	52.20	None
MW-04S	7.00	None	16.50	None
MW-17D	3.00	None	50.40	None
MW-17S	3.40	None	17.20	None
MW-18D	3.70	None	52.60	None
MW-18S	1.00	None	17.20	None
MW-21	5.00	None	28.30	None
SLURRY NORTH	7.90	None	17.50	None
SLURRY SOUTH	11.50	None	21.70	None

Note: Depths measured in feet from top of outer protective casing.

January 11, 2012				
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